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SYMPOSIUM: CLINICAL RISK AND JUDICIAL REASONING

A Modified No-fault Malpractice System Can Resolve Multiple Healthcare System Deficiencies

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Abstract Medical professional liability in the United States, as measured by total premiums paid by physicians and healthcare facilities, costs approximately $30 billion a year in direct expenses, less than 2% of the entire annual healthcare expenditures. Only a fraction of those dollars reach patients who are negligently injured. Nonetheless, the tort system has far-reaching effects that create substantial indirect costs. Medical malpractice litigation is pervasive and physicians practice defensively to avoid being named in a suit. Those extra expenditures provide little value to patients. Despite an elaborate existing tort system, patient safety remains a vexing problem. Many injured patients are denied access to timely, reasonable remedies. We propose a no-fault system supplemented by a variation of the traditional tort system whereby physicians are incentivized to follow evidence-based guidelines. The proposed system would guarantee a substantial decrease in, but not elimination of, litigation. The system would lower professional liability premiums. Injured patients would ordinarily be compensated with no-fault disability and life insurance proceeds. To the extent individual physicians pose a recurrent danger, their care would be reviewed on an administrative level. Savings would be invested in health information technology and purchase of insurance coverage for the uninsured. We propose a financial model based on publicly accessible sources.

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Introduction

When politicians talk about healthcare solutions, many dismiss professional liability as a root cause of high cost. The argument goes that total health care in the United States costs approximately $2 trillion a year [11]. The aggregate cost of professional liability premiums paid by doctors and hospitals is under $30 billion a year [16]. Hence the problem, to the extent it is a problem, can account for no more than 1.5% of the total cost. This argument misses the mark for two reasons. First, total healthcare cost is spread among all Americans. The direct cost of paying for professional liability is borne primarily by healthcare providers and facilities. Providers are not able to seamlessly pass on extra expenses like in most other industries. More importantly, because being sued is such a miserable experience, physicians do whatever they can to avoid repeating the experience. Accordingly, they practice defensively, ordering tests and referrals, often going beyond what is necessary, just to preempt a potential lawsuit.

How common are malpractice lawsuits? It is estimated that there are 50,000 to 60,000 open cases at any one time [10]. Many of these cases name multiple defendants. In

2004, the National Practitioner Data Bank reported entries for over 200,000 healthcare providers since 1990 [17] with 67% of providers being reported just one time. Not all physicians who are sued are reported to the Data Bank. Reporting is required only if payment is made by settlement or judgment related to a written demand by a plaintiff. If the physician is dismissed or he or she wins in court, no report is entered. Hence, the figure 200,000 is not a valid estimate of the base number of physicians affected by the medical tort system. Given there are approximately 700,000 practicing physicians in the United States, these statistics are a sobering reminder of a serious, pervasive problem.

Frequency of lawsuits is a problem across the entire country. Even in states that have implemented substantive tort reform, although the average settlement value is lower, the frequency of lawsuits remains substantial. In California, a state that implemented tort reform early on, the average lawsuit rate is higher than the rest of the country (0.14 to 0.20 annual claims per mature internal medicine-equivalent doctor in California compared with 0.09 to 0.15 for the rest of the nation between 1985 and 2002) [2]. This same phenomenon was noted in Louisiana, another tort reform state. (In 2004, the dominant carrier in the state reported 2057 cases were referred by attorneys or self-represented patients for review by expert panels, a step along the path to litigation. In 2004, the carrier covered 5600 physicians. Hence, average claim frequency was approximately 0.37 [9].) Whether the physician is defending a case for $1 or $10 million, the emotional effects are the same. Physicians do not want to end up in court. Hence, physicians in tort reform states, as elsewhere, feel considerable pressure to practice medicine defensively.

The lifecycle of a lawsuit lingers for a long time. The average time from medical event to claim resolution in most cases is approximately 5 years [14]. Most claims are resolved in favor of the physician [10]. In states such as Ohio [8] and Virginia [5], for example, 80% of claims result in no payout to the plaintiff. However, physicians who are sued and win do not necessarily feel victorious; they simply lose less. Litigation is stressful, and it changes the way physicians perceive their patients and the practice of medicine. There is even a syndrome called medical malpractice stress syndrome that defines a range of somatic symptoms many defendants will experience. Given the frequency of litigation, the length of time to resolution, and the impact such litigation has on the doctor's own health, the defensive practice of medicine is a natural outcome.

Defensive medicine eludes easy definition, but it is believed pervasive. When a select group of physicians in Pennsylvania were asked if they practiced defensively, 93% answered yes [15], prompting one cynic to conclude that the other 7% were liars. The estimated cost of defensive medicine varies from $51 billion to $200 billion [1, 2, 6, 9, 10, 12]. Any number related to the cost of defensive medicine is, at best, conjecture. The high number, $200 billion, was published in a recent study prepared by PricewaterhouseCoopers for America's Health Insurance Plans estimating defensive medicine and liability costs account for up to 10% of total healthcare spending [6]. Arguably, some defensive medicine provides benefit for patients; some paradoxically provides additional liability. Much of the time, no benefit or liability occurs, just cost. The challenge is providing the best balance of cost to benefit. The defensive medicine estimates from the literature impose aggregate direct and indirect costs related to professional liability of 3% to 10% of total healthcare expenditures. Intertwined with the concept of defensive medicine, but separate, is implementation of efficient best practices. Across the country there is considerable variation in practice patterns. This variation imposes considerable costs without a requisite improvement in outcomes. For example, at the population level, Medicare patients with severe chronic illness in higher-spending regions receive more care than those in lower-spending regions but do not have improved patient survival, quality of life, or access to care. In fact, their outcomes appear worse [4]. It is reasoned that embracing best practices would improve clinical outcomes at a lower cost; in other words, improve patient safety at a lower cost. Although pay-for-performance programs have been recommended as a way to coax physicians to embrace efficient best practices, an equally powerful incentive would include a solution to litigation.

What follows is a proposal for reforming the entire healthcare system by harnessing the tremendous emotional energy surrounding litigation for more positive ends, benefiting all stakeholders. In exchange for providing ways to predictably remove physicians from an adversarial legal system, patients would have access to near-term predictable remedies. Patient safety systems would be funded. Additional savings could be redistributed to fund programs for patients currently uninsured.

A Potential Solution

A reformed system would (1) focus on the patient; (2) be voluntary; (3) keep costs of health insurance premiums low; (4) implement patient safety systems; (5) shield physicians from litigation but not accountability; (6) lower professional liability premiums; (7) provide a no-fault, predictable safety net for injured patients; and (8) pay for itself by redistribution of funds already circulating in the system.

An understanding of health care in the United States begins by recognizing that the different stakeholders

(patient, physicians, and payers) have different needs and wants. What do consumers/patients want? They want to receive more value, ideally by paying less. They want to be safe. If they experience a bad medical outcome, they do not want to lose their house or college fund. Patients do not want to trade extra risk upfront in the hope of winning a large sum in court down the road.

What do physicians want? They do not want to be sued. That includes even those who may have left a sponge in the abdomen. Because the litigation experience is so onerous, physicians would prefer decoupling just patient compensation from the adversarial process. Physicians also want to pay lower professional liability premiums. To the extent care is managed, physicians want to be front-and-center developing the care pathways and algorithms for managing patients. Finally, if a physician delivers superior results, he or she wants to be paid more.

What do payers want? The payers include business, insurance companies, and the government. They want physicians to practice cost-efficient medicine, delivering value. To that end, they want physicians to more consistently embrace efficient best practices and avoid defensive practices. They recognize there will be times physicians, in their judgment, need to deviate from such pathways, and they recognize there might be multiple pathways to treat the same condition. Nonetheless, payers would prefer care be more reproducible and less idiosyncratic.

These goals and desires are not mutually exclusive. Eliminating or decreasing litigation is an important step in realizing these goals. The current system, which relies on tort remedies, aims to deter negligent acts while making injured parties whole. It accomplishes neither. The proposed model can accomplish these twin goals while providing major collateral benefits.

How the Model Works

The proposed model relies on a contractual interaction among the three groups of stakeholders. Each stakeholder gives up a little to receive much more.

When consumers purchase a health insurance policy, they would voluntarily transfer any future right to sue (for negligence) to the payer. In this model, a consumer would be foreclosed from initiating litigation. Instead, the payer could sue the doctor in select circumstances. In exchange for transferring the future right, the consumer receives a number of near-term benefits. First, his or her health insurance policy costs less. He or she also receives the benefit of patient safety systems such as electronic medical records, electronic clinical diagnostic aids, computerized physician order entry systems, and more. Finally, the consumer receives a disability and life insurance policy. Should there be any untoward outcome, whether through negligence, progression of a disease, or bad luck, the patient could access a predictable safety net in short order. Disability insurance would cover expenses related to time off from work; life insurance would provide resources to the family when a provider (wage earner) dies. From the patient's perspective, there would be no upfront adversarial process and the amount of the payout would be dictated by a predetermined formula. Furthermore, the injured patient would be guaranteed continued health care and rehabilitation services. The tradeoff is patients would not ordinarily receive seven-figure settlements. Nonetheless, they would be able to protect their assets, carry on, and receive any needed care.

In this model, there is still a role for the traditional tort system. The payer could conceivably sue the physician. In general, the payer would prefer not to do so, because physicians perform needed services for their insured customers. So, payers would enter into an agreement with physicians. If the doctor follows cost-effective algorithms, developed bottom up with substantial physician input, the physician would be effectively immune from litigation. If these algorithms are not followed, the doctor could document why. It is only the combination of the physician ignoring the pathways associated with a breach in the standard of care causing damages that the physician would be at risk for litigation. Some or all of the award from such litigation could be passed back to the patient (the case being stronger for those injured by gross negligence). Physicians would be armed with knowledge of how to predictably avoid an adversarial legal process. The system would provide funds to enable information technology to allow physicians to access these algorithms and document their compliance. This knowledge should translate into greater compliance and less frequent litigation. Accordingly, professional liability premiums should decrease. In this model, physicians would not feel compelled to practice defensively. Rather, they would be incentivized to practice effectively. The savings accrued could be redistributed to achieve the goals in the wish list.

Can It Work?

We ran a financial model run using Monte Carlo simulations that demonstrated if physicians are properly incentivized to follow efficient best practices, there is enough money left over to prefund patient safety systems, purchase disability and life insurance policies for consumers, and purchase health insurance policies for all uninsured Americans. Monte Carlo simulation is a computer model that generates thousands of probable future outcomes. The simulation looks at a number of inputs

combined in "random" order. As a result, it is designed to account for the uncertainty inherent in complex systems such as health care. The simulation concludes that by providing a formula for decreasing frequency of litigation, patients can paradoxically be safer, have better access to care, and have broader remedies if they are injured. Where the conventional tort system arguably has failed, namely in maximizing patient safety and making those who are injured whole, a reformed system that more often than not keeps doctors out of court could succeed.

There are many details that, for the sake of brevity, are not addressed in this article, although they are addressed in the model (supplemental Appendix available with the online version of CORR). For example, some injuries require remedies different than disability or life insurance. Two low-frequency, high-severity events serve as examples; these are catastrophic birth injury and quadriplegia. Here, the most important consideration is access to health care, rehabilitation services, and support for activities of daily living. A separate fund would be set up to address these needs.

Next, will insurance companies really sue a physician? There is a second proposal in which the patient transfers his or her right to sue to a "neutral third party." Such a third party could provide the proper distance between all of the stakeholders to eliminate any actual or perceived conflict of interest yet still obtain an optimal result.

Will patients actually transfer their right to sue? For a number of years, New Jersey citizens have had the opportunity to choose between two types of automobile insurance. One version limits litigation, whereas the other provides full access to the courts as before. The two versions are distinguished by cost. Most (85%) automobile owners in New Jersey now choose the less expensive version. They prefer the benefit today as opposed to preserving some ambiguous rights in the future [7, 19]. What is meant by efficient best practices? An example will help clarify. In the United States, a person who experiences a minor concussion generally goes to an emergency room. Such a concussion might be associated with a brief loss of consciousness, nausea, headache, and the like. Nonetheless, on arrival in the emergency room, the patient is usually neurologically intact. The challenge is to limit an imaging study only on those patients who either have or are likely to develop an intracranial abnormality without scanning everyone. Put a different way, the challenge is to minimize use of resources without causing harm. A prospective study identified five high-risk factors for intracranial pathology after minor head injury, including mechanism of injury and age [13]. If the patient were involved in a motor vehicle accident, they would be scanned. If the patient was older than 65, they would be scanned. Using such criteria allows fewer patients to be scanned, but not at the expense of missing pathology. The five high-risk factors were 100% sensitive, 68.7% specific, and when followed, only required 32% of patients to be scanned. Most patients who qualified for scanning had no pathology. However, no patient who would have been triaged away from the scanner had pathology. In other words, resources could be saved without causing harm [13].

Such algorithms could evolve over time and, as much as possible, be based on best evidence. There will be times when the physician consciously chooses a different course. Nonetheless, by adhering to evidence-based guidelines most of the time, costs will go down, patients will be safer, and money saved will solve other ills of the current system.

The technical challenge to advancing the general model first requires success at the proof of principle stage. Such a test would need to demonstrate the underlying assumptions are accurate and the model is financially sound. A test program might best be initiated in a vertically integrated medical system. Other variables that would optimize for near-term success include testing the model (1) in a state with a difficult tort environment; and/or (2) in a locale with a dominant medical delivery system or payer.

Discussion

Our proposal for reforming our healthcare system is based on underlying medicolegal considerations.

The medicolegal tort system imposes reasonably low direct costs on US health care. However, its effects are far-reaching, imposing a cascade of indirect costs in addition to the emotional trauma inherent in a judicial system designed on the adversarial system. The proposed model links the needs and wants of three stakeholders: consumers, physicians and healthcare facilities, and payers. Each party gives up a little to receive much more. The common theme is that litigation is minimized. In return, patients will be safer and have access to a predictable, readily accessible safety net. Physicians will be able to practice medicine and more predictably avoid setting foot in court. Their professional liability premiums will decrease. Information technology systems will be standard fare and doctors will have fingertip access to efficient best practices and a way to record compliance. There will be enough cash left over to provide health insurance coverage to the uninsured. Hence, we need no more than the current bill of $2 trillion to fund a 21st century healthcare system for our country.

There are precedents for decoupling remedies for injured parties from an adversarial court process. In New Zealand, for example, injured patients appeal to an administrative body. If an investigation reveals harm was sustained because of medical care, the patient receives an award. The size of the award is predicated on such factors as age, extent of disability, length of disability, and the

like. The New Zealand model is generally characterized as a "no-fault system" and reimburses for medical "misadventures." The system does not reimburse for the natural consequences of a medical condition [3].

A more expansive administrative remedy is illustrated by the workers' compensation system in the United States. There, an injured party need prove little more than an injury was sustained and sustained while on the job. Again, no determination of negligence is necessary and payment is calculated from a matrix of limited values. In the workers' compensation system, the employer is immunized from litigation and the worker receives a generally predictable remedy.

Portions of the proposed reform model have much in common with both the New Zealand model and the workers' compensation model. In all three, a no-fault approach is adopted to provide benefit to an injured party. The proposed model, however, is more generous in terms of benefits, the goal being to provide maximum incentives for patients to comfortably opt out of the tort system and conclude they received a "good bargain." Once voluntarily separated from the tort system, patients should not have to second-guess their decision. If patients have "buyer's remorse," the long-term sustainability of the proposed model would be at risk. In New Zealand, for example, only 40% of claims are accepted. Payments are modest, averaging approximately $30,000, but are sufficient to meet the costs of treatment, rehabilitation, lost wages, care of dependents, and other expenses. The New Zealand model, although an improvement over the US adversarial tort system, still limits who can access payment and how much payment is received [3]. Furthermore, that model works well in the context of an overall socialized system such as New Zealand. It is unclear such a model, in isolation, could be readily adopted within the American system.

The proposed reform model is more akin to a workers' compensation system, because disability insurance principles overlap considerably with workers' compensation insurance principles. The primary difference lies in workers' compensation being a system mandated by state law, whereas the proposed reform model is based on voluntary participation in a contract-based system. The state compels all employers to purchase workers' compensation insurance for their employees. The proposed health reform model, on the other hand, is a market-based proposal whereby patients make a choice to opt in or opt out. If they opt in, they can receive, by contract, full benefits that accrue if and when the conditions of their disability or life insurance policies are satisfied.

The model is much more than a no-fault system. It is a system of aligned incentives that feeds back to influence physician behavior. Although the New Zealand system and workers' compensation system do have some modest effects on physician and employer behavior, respectively, the proposed model is designed to maximally leverage changes in healthcare delivery to self-fund a number of initiatives. Furthermore, in the proposed model, the current tort system continues to lurk in the background. Failure to embrace efficient best practices that negligently results in patient harm will just as predictably result in a lawsuit as full compliance will immunize.

Regarding the model's acceptance by consumers, the system posits that health insurance purchasers will trade future rights for present gain. By analogy, in New Jersey, a discounted automobile insurance policy is available for those who will limit future legal rights. The less expensive, more restrictive automobile insurance version is the most popular. Is cheaper automobile insurance analogous to health insurance? In the New Jersey car insurance model, policyholders' right to sue for pain and suffering is foreclosed for minor injuries. Nonetheless, they preserve considerable legal rights if their injuries result in death, dismemberment, disfigurement, and the like [7, 19]. Would health insurance purchasers transfer future rights if the following question were posed: Will the patient be limited to disability or life insurance proceeds if they lose an arm or leg, for example, as a result of a medical error? A more probing question would frame the issue as follows: Would you, the purchaser, prefer a system that is lower in cost and provides a predictable near-term remedy through no-fault disability or life insurance? Alternatively, would you prefer to wait years for a remedy in court giving 40% of a judgment to your attorney and likelihood of less than even odds that you will prevail? Now assume you have lost an arm or a leg because of a medical error. The tradeoff is you will receive less money if you are paid near term. Now assume because you have lost a limb, you have bill collectors calling daily and your house is at risk for foreclosure. Which do you prefer?

Framed in this way, most on the fence will likely conclude that future rights are less important than near-term predictable benefits. Daniel Kahneman won the Nobel Prize in economics in 2002 for lifelong work documenting that most people are generally risk-adverse and given a choice between two risk-adjusted choices, most will irrationally choose the near-term safer approach [18]. A cursory look at the spending habits of Americans as the consummate consumers would similarly verify we discount the future. We buy today, on credit, instead of propping up our 401 k plans. If the proposed model can succeed in any country, the US would be its most natural home. In short, patients are likely to view the benefits of the model as bettering the status quo.

Will insurance companies accept the model and what would be their motivation to lower premiums or provide additional benefits? The short answer is money. The system

is actuarially based. It does not require all carriers to opt in and lower rates. It only requires a dominant carrier or critical mass of carriers to test the model. If the model succeeds, that carrier will prevail in market share. In addition, the decreased revenue associated with reduction in premiums will likely be less than the reduction in costs. In other words, profitability increases. Tools that increase a carrier's potential for increased profit will likely receive a serious look.

Is it possible for carriers to obtain the best of all worlds, allowing reimbursement only when clinical algorithms are followed and denying payment to any physician who strays? There, the carrier would not have any motivation to lower rates or provide any additional benefits. Although such a system could arguably be implemented for a small collection of issues, eg, no payment for wrong-sided surgery, there is no practical way to implement that approach for a broad variety of chronic conditions. Physicians need latitude to deviate from algorithms. The proposed model allows such deviation if, in the physician's clinical judgment, it is the right thing to do. There, the physician has contemplated the algorithm and consciously avoided its use in his or her patient. In such a setting, he or she is presumably doing so because he or she believes it is in his or her patient's best interest. To make payment contingent on using an algorithm 100% of the time, instead of 95% of the time, for example, would create an untenable tension, placing cash in front of judgment. That would not be a proper alignment of incentives. Finally, if a carrier only paid for blind adherence to protocols, assuming physicians even accepted that paradigm, that would likely constitute de facto corporate practice of medicine, which is currently prohibited by law.

There are countless limitations with embracing a new model of health care. A $2 trillion machine does not readily turn on a dime. All stakeholders would need to buy in. Any system that produces savings must extract those efficiencies from people and entities currently profiting from the status quo. Such participants will not yield without a struggle. Next, the plaintiff's bar will likely express concern with transferring a long-held right, namely the right to sue. The system actually provides a carrot for attorneys. Currently, the plaintiff's attorneys carry major risk. They must advance funds. These lawsuits often take years to resolve. If evidence of deviation from clinical algorithms can sidestep the "battle of the experts," attorneys will be able to screen cases better, decreasing their risk, and turning what was previously an exercise in theatre into a more predictable near-term transaction.

Finally, creation of clinical algorithms will be challenging. Nonetheless, hundreds, if not thousands, of such algorithms from best evidence already exist. Many large, vertically integrated healthcare delivery systems currently embrace such algorithms. Professional specialty societies will presumably play a role in creating and amending new algorithms. Of course, some conditions may never reduce easily to algorithms. As evidence accumulates, however, more algorithms will appear online.

In summary, although the medicolegal system imposes substantial costs on the healthcare system, it presents the opening to potentially solve a host of systemic problems. As costly as the tort system is, it fails to deter negligence or consistently make injured patients whole. A market-based solution allowing patients to opt out of the existing tort system in exchange for a portfolio of benefits is financially viable. The extra cost incurred by bundling health insurance with disability and life insurance can be balanced by savings from embracing best practices. Although many physicians are aware of best practices, the "carrot" of predictable immunity from the medicolegal "stick" can accelerate adoption. By jettisoning a capricious tort system, patients, doctors, and payers can all participate in a new voluntary, contract-based system in which all parties benefit.

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